

Notice of Allowability

Application No.

10/091,011

Examiner

Michael Kornakov

Applicant(s)

KASHKOUSH ET AL.

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/03/2004.
2. ☒ The allowed claim(s) is/are 1 and 3-9.
3. ☒ The drawings filed on 05 May 2004 and 04 March 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Michael Kornakov
Primary Examiner
Art Unit: 1746

M. Kornakov 03/17/04

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. B. Belles, esq., on 08/17/2004.

The application has been amended as follows:

In the disclosure on page 3, line 5 delete the words "and at a tighter" after the words "for cleaning integrated circuits significantly below previously reported levels"

In the disclosure on page 3, line 29 delete the clause "A pre-bake low temperature of only 700°F or below is necessary with the cleaning method of the invention." after the words "deposition than prior methods."

In the disclosure on page 4, line 14 after the word "water" insert ---,most preferably the dilute SC1 solution having ammonium hydroxide content at about 1.5% or less by weight---

These amendments are made in order to clarify and better address the essence of the instant invention.

Cancel claims 2, 10-15.

In claim 1 after the words "dilute SC1 solution" insert ---having ammonium hydroxide content at about 1.5% or less by weight---

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This amendment is made in order to characterize the dilute SC1 solution and overcome the prior art reference to Verhaverbeke et al.

In claim 5 delete the words "in water" after the word "peroxide".

Response to amendment

2. All previous objections and rejections have been overcome by Applicants' amendment, filed 06/03/2004, in combination with Examiner's amendment and the said objections and rejections are withdrawn.

Allowable Claims

3. Claims 1, 3-9 are allowable over the prior art of record.

Reasons for Allowance

4. The following is an examiner's statement of reasons for allowance:

The cleaning method, disclosed by Applicants comprises a number of pre-epitaxial processing steps, wherein the dilute SC1 solution having ammonium hydroxide content at about 1.5% or less by weight is utilized. Applicants showed the evidence that pre-epitaxial treatment of wafers with such diluted SC1 solution in combination with the other recited processing steps is beneficial due to reduction of post-epitaxial defects on wafer surfaces compare to conventional pre-epitaxial wafer processing. No other prior art that anticipates or suggests fairly the combination of processing steps and content of utilized ingredients for

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pre-epitaxial wafer treatment has been located as of the date of this office action.

Therefore, claims 1, 3-9 are allowed over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (571) 272-1303. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Kornakov

Michael Kornakov

08/17/04

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Primary Examiner
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08/17/2004